

CLAIMS

1. A protein containing the same or substantially the same amino acid sequence as the amino acid sequence represented by SEQ ID NO:1, or a salt thereof.

2. A partial peptide of the protein according to claim 1, or a salt thereof.

3. A polynucleotide containing a polynucleotide having a base sequence encoding the protein according to claim 1.

4. A polynucleotide according to claim 3, which is DNA.

5. A polynucleotide according to claim 3, which is represented by SEQ ID NO:2.

6. A recombinant vector containing the polynucleotide according to claim 3.

7. A transformant transformed with the recombinant vector according to claim 6.

8. A method of manufacturing the protein or its salt according to claim 1, which comprises culturing the transformant according to claim 7 and accumulating the protein according to claim 1.

9. An antibody to the protein according to claim 1, the partial peptide according to claim 3, or a salt of the protein or partial peptide.

10. An antibody according to claim 9, which is a neutralizing antibody capable of inactivating signal transduction of the protein according to claim 1.

11. A diagnostic composition comprising the antibody according to claim 9.

12. A ligand to the protein or its salt according to claim 1, which is obtainable using the protein according to claim 1 or the partial peptide according

to claim 1, or a salt of said protein or partial peptide.

13. A pharmaceutical composition comprising the ligand according to claim 12.

14. A method of determining a ligand to the protein or its salt according to claim 1, which comprises using the protein according to claim 1 or the partial peptide according to claim 1, or a salt of said protein or partial peptide.

15. A method of screening a compound that alters the binding property between a ligand and the protein or its salt according to claim 1, wherein the protein according to claim 1, the partial peptide according to claim 1, or a salt of the protein or partial peptide.

16. A kit for screening a compound or its salt that alters the binding property between a ligand and the protein or its salt according to claim 1, comprising the protein according to claim 1 or the partial peptide according to claim 1, or a salt of said protein or partial peptide.

17. A compound or its salt that alters the binding property between a ligand and the protein or its salt according to claim 1, which is obtainable using the screening method according to claim 15 or the screening kit according to claim 16.

18. A pharmaceutical composition comprising a compound or its salt that alters the binding property between a ligand and the protein or its salt according to claim 1, which is obtainable using the screening method according to claim 15 or the screening kit according to claim 16.

19. A polynucleotide that hybridizes to the polynucleotide according to claim 3 under a highly stringent condition.

20. A polynucleotide comprising a base sequence complementary to the polynucleotide according to claim 3 or a part of the base sequence.

21. A method of quantifying mRNA of the protein according to claim 1, which comprises using the polynucleotide according to claim 3 or a part of the polynucleotide.

22. A method of quantifying the protein according to claim 1, which comprises using the antibody according to claim 9.

23. A diagnostic method for a disease associated with functions of the protein according to claim 1, which comprises using the quantification method according to claim 21 or claim 22.

24. A method of screening a compound or its salt that alters the expression level of the protein according to claim 1, which comprises using the quantification method according to claim 21.

25. A method of screening a compound or its salt that alters the amount of the protein according to claim 1 in cell membrane, which comprises using the quantification method according to claim 22.

26. A compound or its salt that alters the expression level of the protein according to claim 1, which is obtainable using the screening method according to claim 24.

27. A compound or its salt that alters the amount of the protein according to claim 1 in cell membrane, which is obtainable using the screening method according to claim 25.